

WHAT IS CLAIMED IS:

1. A wiper control system comprising:

5 a rain droplet detector with a plurality of switches that are configured to be electrically connected by rain droplets, each switch outputting one of two different signals according to an electrical connection thereof;

a multiplexer receiving signals from each of the plurality of the switches, the multiplexer being configured to repeatedly perform a process of selecting one of the received signals and outputting the selected signal;

10 a count register connected to the multiplexer to receive the signal output from the multiplexer, the count register counting a number of the signals corresponding to the electrical connection of the switches of the rain droplet detector and outputting a counted value; and

15 a wiper control unit connected to the count register to receive the counted value, the wiper control unit controlling a speed of a wiper based on the counted value.

2. The wiper control system of claim 1, further comprising a clock signal provider providing a clock signal to the multiplexer, wherein the multiplexer selects one of the signals input from the rain droplet detector based on the received clock signal.

20 3. The wiper control system of claim 2, wherein the multiplexer is configured to sequentially output the signals input from the plurality of switches in response to the received clock signal.

25 4. The wiper control system of claim 2, further comprising a wiper position sensor detecting a position of the wiper and outputting a corresponding wiper position signal, wherein the clock signal provider receives the wiper position signal and is configured to output the clock signal when the wiper rotates by a predetermined angle.

5. The wiper control system of claim 4, wherein the predetermined angle is 45 degrees.

6. The wiper control system of claim 1, wherein the wiper control unit determines a rain droplet amount level based on the received counted value, determines

a wiper speed level based on the determined rain droplet amount level, and controls the wiper to operate at the determined speed level.

7. The wiper control system of claim 6, wherein the wiper control unit determines the rain droplet amount level using the counted values that are acquired during 3 strokes of the wiper.

8. The wiper control system of claim 1, further comprising a vehicle speed sensor detecting a vehicle speed and outputting a corresponding vehicle speed signal, wherein the wiper control unit receives the vehicle speed signal and controls the speed of the wiper based on the vehicle speed signal.

9. The wiper control system of claim 8, wherein the wiper control unit stops a control of the speed of the wiper when the vehicle speed is higher than a predetermined speed.

10. The wiper control system of claim 1, wherein the wiper control unit is programmed to perform a control logic comprising:

determining an initial wiper speed level among a plurality of wiper speed levels corresponding to different wiper speeds;

determining a current rain droplet amount level among a plurality of rain droplet amount levels based on the received counted value; and

controlling the speed of the wiper based on the initial wiper speed level and the determined rain droplet amount level.

11. A wiper control method comprising:

determining an initial wiper speed level among nine predetermined wiper speed levels that include nine sequential levels from a wiper speed level 1 to a wiper speed level 9, each of the predetermined wiper speed levels corresponding to a different wiper speed;

detecting an amount of rain droplets and determining a corresponding rain droplet amount level among seventeen predetermined rain droplet amount levels that include seventeen sequential levels from a rain droplet amount level 0 to a rain droplet amount level 16, each of the predetermined rain droplet amount levels corresponding to

a different rain droplet amount; and

controlling a wiper speed based on the rain droplet amount level and the initial wiper speed level.

5 12. The wiper control method of claim 11, wherein in the controlling a wiper, the wiper speed level is regulated based on the rain droplet amount level and the initial wiper speed level, and the wiper is controlled to operate a predetermined number of times in response to the regulated wiper speed level.

10 13. The wiper control method of claim 11, wherein in the controlling a wiper, the wiper is controlled to not operate if it is determined that the amount of rain droplets corresponds to the rain droplet amount level 0 indicative of no rain droplets.

15 14. The wiper control method of claim 11, wherein in the controlling a wiper, in the case that the amount of the rain droplets corresponds to a rain droplet amount level 1, the wiper speed level is maintained if the initial wiper speed level is the wiper speed level 1, the wiper speed level is lowered by one level if the initial wiper speed level is the wiper speed level 2, and the wiper speed level is lowered by two levels if the initial wiper speed level is between a wiper speed level 3 and a wiper speed level 9.

20 15. The wiper control method of claim 11, wherein in the controlling a wiper, in the case that the amount of the rain droplets corresponds to between a rain droplet amount level 2 and a rain droplet amount level 4, the wiper speed level is maintained if the initial wiper speed level is the wiper speed level 1, and the wiper speed level is lowered by one level if the initial wiper speed level is between a wiper speed level 3 and a wiper speed level 9.

25 16. The wiper control method of claim 11, wherein in the controlling a wiper, in the case that the amount of the rain droplets corresponds to between a rain droplet amount level 5 and a rain droplet amount level 12, the wiper speed is maintained at the initial wiper speed level.

17. The wiper control method of claim 11, wherein in the controlling a

wiper, in the case that the amount of the rain droplets corresponds to between a rain droplet amount level 13 and a rain droplet amount level 15, the wiper speed level is increased by one level if the initial wiper speed level is between a wiper speed level 1 and a wiper speed level 8, and the wiper speed level is maintained at the initial wiper speed level if the initial wiper speed level is a wiper speed level 9.

18. The wiper control method of claim 11, wherein in the controlling a wiper, in the case that the amount of the rain droplets corresponds to a rain droplet amount level 16, the wiper speed is increased by two levels if the initial wiper speed level is between a wiper speed level 1 and a wiper speed level 7, the wiper speed is increased by one level if the initial wiper speed level is a wiper speed level 8, and the wiper speed is maintained at the initial wiper speed level if the initial wiper speed level is a wiper speed level 9.